

Date: Fri, 2 Jul 93 16:35:51 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #814
To: Info-Hams

Info-Hams Digest Fri, 2 Jul 93 Volume 93 : Issue 814

Today's Topics:

 20m hot on FD
Alinco will modify DJ-580 to reduce intermod, and I'm a new DR-600T owner
 Field Day and Packet Clusters
 Help needed to make microstrip structures
 Mail Returned - Invalid NWD1 mail ID
 need tech. manual for FT-727R
 Questions about wire.
 rec.radio.amateur.atv? pointers?
 Repeater coordination, complaints? (2 msgs)
 RG-58 coax cable vs. RG-223 (2 msgs)
 tornado last night
 WANTED: FT202R Manual

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 2 Jul 93 20:11:51 GMT
From: orca!olin!alan@uunet.uu.net
Subject: 20m hot on FD
To: info-hams@ucsd.edu

In article <1993Jul2.170541.11428@tijk02.uucp> eri316@tijk02.uucp (Ed
Ingraham) writes:
>From article <m35v7gINNjju@news.bbn.com>, by levin@bbn.com (Joel B Levin):
>> tcline@hplvec.LVLD.HP.COM (Ted Cline) writes:
>> stand by; Alpha Charlie Six, copy fifteen-Alpha New Hampshire, qsl?).
>

>Fifteen Alpha...gee our club scrapes just to get 2 transmitters out for FD.
>And we shut the generators down and go to bed around midnight due to lack of
>operators. I'd like to see an operation like yours. Just how do you organize
>15 transmitters and 15 antennas within the bands and, what, 1000 ft?

A football field is only 300 feet long, so a 1000 foot circle is quite a bit of room. It is helpful to distribute the CW and SSB stations at opposite ends of the site. Low power and sharp filters for the receivers are necessities because of the close proximity of all of the stations. I was a part of a serious 11A effort back in 1967 (Pacifico Radio Club, K6BAG). We ran KWs and beams on the high bands and high dipoles (100') on the low bands. We made over 5000 QSOs which at the time was a new all time record. We operated from the top of an 8000 foot mountain near Los Angeles (Mount Pacifico). We had to use crystal filters on all of the receivers to keep the other KW stations out. Yes, it takes lots of operators to keep everything running for a 24 hour period. Each station needs at least two operators and it is better if there are three or four per station. However, some bands shut down at night, so those stations can go unmanned for several hours. Out here in the West, 80 meters is not very active during the day, so we only go on 80 and 75 meters at night. Not true in the East.

--

Alan Brubaker, K6X0 |~|_ "Pumps have handles, Hams have names;
<IYF disclaimer> | * |mine's Lee, what's yours?" - Lee Wical,
Internet: alan@dspd.es.com|____|KH6BZF, the Bloomin' Zipper Flipper.

Date: Fri, 2 Jul 1993 21:59:33 GMT
From: well!moon!pixar!news@uunet.uu.net
Subject: Alinco will modify DJ-580 to reduce intermod, and I'm a new DR-600T owner
To: info-hams@ucsd.edu

I spoke with an Alinco service representative at 310-618-8616. He said that if you pack up your radio with the _sales invoice_ and send it to them with a note requesting that they reduce the intermod, they will modify the radio without charge. They will charge you if you don't send the sales invoice. Apparently, this means that there really was a recent manufacturing change to reduce intermod, and they can apply it at their shop. The service person declined to give me instructions on how to perform the mod.

I was happy that they would modify my DJ-580 for free, and pleased with my DR-1200 after I did its intermod-reducing modification, so I went out and bought a brand new Alinco DR-600T.

I'd suggest that whatever way you send it, ship with insurance for the full

value of the radio. Address it to:

Alinco Electronics
Service Department
438 Amapola Ave. #130
Torrance Ca. 90501

Date: 2 Jul 1993 20:09:20 GMT
From: sdd.hp.com!math.ohio-state.edu!howland.reston.ans.net!noc.near.net!
jericho.mc.com!fugu!levine@network.UCSD.EDU
Subject: Field Day and Packet Clusters
To: info-hams@ucsd.edu

repeaters are allowed for packet contacts on FD, so it's like
calling cq anywhere else.....

Date: Fri, 2 Jul 1993 20:23:30 GMT
From: sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!glenne@network.UCSD.EDU
Subject: Help needed to make microstrip structures
To: info-hams@ucsd.edu

Brian McMinn, N5PSS (brian@amdcl2.amd.com) wrote:

: Another source of error to watch out for is the equations themselves.
: The differential equation for L and C values of a microstrip has no
: closed form solution unless certain simplifying assumptions are made.
: For PC board traces, the interesting parameters are width (w),
: thickness (t), height above plane (h) and dielectric constant
: (epsilon). Depending on the relative sizes of these, the closed form
: approximation can be quite different. (Hence the different equations

While I agree with Brian that there is a discontinuity in the
predicted impedance curve due to the step in assumptions, this step is
on the order of a few percent for commonly used line impedances. I
believe that a step this small is not going to introduce a large amount
of error compared to the typical amateur's ability to measure line
impedance or observe the effects of mismatch.

A 5% error in line impedance creates a SWR of about 1.1:1 and a
return loss of about 26 dB. I maintain that above HF, *most* amateur
measurements have greater errors due to component imperfections, coax to
microstrip transitions, radiation etc etc. Without a vector network

analyzer and error correction, either through using quality standards appropriate to the measurement environment (microstrip in this case) or time gating, it starts to be pretty difficult to observe errors of this size.

Most amateurs would be happy with a dummy load that delivered 26 dB of return loss not to mention components or circuits this good.

: you find in books). When the relative sizes don't fit within the
: simplifying assumptions, you'll either need a numeric solution or
: you'll have to go for trial and error.

: Board vendors who specialize in controlled impedance PC boards have a
: series of test structures (mostly lines of various widths) that they
: use to calibrate their processing. If you have reasonably good
: control over your board etching process, a supply of controlled
: quality board material and a way to measure trace impedance (a TDR?),
: this is the "low computation" way to go.

From my experience with common (inexpensive) board materials you'll need to verify the particular board material characteristics every time in order to hold tolerances closer than the error due to the equations.

Fiberglass/epoxy board not only has varying dielectric constant, batch to batch, but also varying thickness and, on top of that, it is not isotropic: the dielectric constant varies depending on the axis of measurement.

In summary, I'd suggest that for most applications there are probably a lot of other real-world factors to consider and control before the error due the equations becomes significant.

73,

Glenn Elmore n6gn

N6GN @ K3MC

amateur IP: glenn@SantaRosa.ampr.org

Internet: glenne@sr.hp.com

Date: Fri, 02 Jul 93 14:16:14 GMT

From: csus.edu!netcom.com!netcomsv!bongo!skyld!janguis@decwrl.dec.com

Subject: Mail Returned - Invalid NWD1 mail ID

To: info-hams@ucsd.edu

In article <bfrb03Eod5FS00@amdahl.uts.amdahl.com> ikluft@uts.amdahl.com writes:

> But we see this bounced mail coming back from the mail list often enough here
> that it makes me wonder if they haven't set up any filtering in the other
> direction... or is/was it broken today?

Why don't you go down there and fix it for Brian. I'm sure he'd appreciate the help.

J. Angus: jangus@skyld.tele.com -- "Als ik Kan", Gustav Stickley
US Mail: PO Box 4425 Carson, CA 90749-4425 1 (310) 324-6080

Date: Fri, 2 Jul 1993 23:13:11 GMT
From: world!jwm@uunet.uu.net
Subject: need tech. manual for FT-727R
To: info-hams@ucsd.edu

The title says it all: I need the technician's manual for my Yaesu FT-727R HT. In particular, I need to know what to tweak to get its output frequency back in spec; other tech-manual info would be useful too.

I'm willing to pay a reasonable fee, postage, etc. Please contact me via e-mail at jwm@world.std.com.

Thanks and 73 de
Jon N1ILZ

Date: Fri, 2 Jul 1993 21:24:22 GMT
From: sdd.hp.com!cs.utexas.edu!math.ohio-state.edu!hobbes.physics.uiowa.edu!news.uiowa.edu!alchemy.uhl.uiowa.edu!jstroppe@network.UCSD.EDU
Subject: Questions about wire.
To: info-hams@ucsd.edu

You might try the local electric supply houses. I have used 6/4 SO service cable for 1kw 120 vac power inverters in autos. I paralleled two of the inner conductors to get the current rating. The electric supply also carries cartridge fuses and holders that are in the range you are looking for. 10/4 cable should be big enough for 50 amps if you do not run it very far. Good luck. John WA0VYZ

Date: Fri, 2 Jul 1993 23:13:41 GMT
From: usc!sol.ctr.columbia.edu!news.unomaha.edu!cwis!pschleck@network.UCSD.EDU
Subject: rec.radio.amateur.atv? pointers?
To: info-hams@ucsd.edu

In <C9JuxC.vM@rahul.net> davidj@rahul.net (David Josephson) writes:

>Looking for pointers to internet discussions/info sites/
>usenet groups on atv. CQ TV?

Check out my recently-posted "Amateur Radio Elmers Resource Directory," which should have a few ATV Elmers who would be more than happy to talk technical via E-mail, and possibly start up some discussion on the newsgroups.

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

Date: Fri, 02 Jul 93 18:10:26 GMT
From: swrinde!emory!rsiatl!jgd@network.UCSD.EDU
Subject: Repeater coordination, complaints?
To: info-hams@ucsd.edu

mwgordon@nyx.cs.du.edu (Mike Gordon) writes:

> Was the other station running legal limit on a high tower?

Define "legal limit", Mike. I'll give you a hint about it though. It doesn't really matter. High site-to-high site is horizon limited. A couple of watts goes about as far as a couple KW. let me give you another hint. Running more power than the average mobile is useless because the repeater can't hear the mobile. Every repeater trustee I've ever spoken with understands this concept. Any more power wastes energy and component life and is expensive.

>I think
>not! Otherwise it would have mixed and heterodyned with your users. PL
>is not this magical invention that makes new frequencies. Even an HT
>without PL encode can heterodyne with a radio sending PL to the input
>of a repeater that is on PL decode. (sounds horrible, btw)

If you're so close that both transmitters capture your receiver, you have one option - change frequency. Or see if you can convince the other guy to. You're not going to "make" anyone do anything so get that notion out of your head. You either work it out with the other site on a friendly

basis or you change frequencies or you learn to live with it.

> I've worked with some commercial installations, and on any 'responsible'
>(I know how you LOVE that word John) system, the base stations do not
>have their receive PL gated (or they have a busy lamp) so that the
>operator's don't step all over other systems on their freq. Most commercial
>mobiles also have busy lamps, and turn off the PL decode when the mic is
>taken off the hook.

Probably help to know what you're talking about. What you say is true only
on community repeaters where several subscribers use the same carrier
frequency but different PLs in order to create the illusion of privacy.
(you recall what "PL" stands for?) This has nothing to do with two separate ham
radio repeaters on the same frequency.

>>For interference on the output, the solution is trivial. Put PL on the
>>repeater transmitter. Then any user who doesn't want to hear the other
>>repeater can simply install (or turn on) the PL decoder.

> The original poster stated that the other station was running 1.5kw
>from a high tower, and that it DOES mix with and step on his repeater's
>output.

No he didn't. He claimed the other machine was running the "legal
limit". I'll be charitable and assume he knows what the legal limit is.
It is obvious >>YOU<< don't. I'm still waiting for you who, in true ham
fashion argue vociferously from a perspective of abject ignorance, to
define the term. I *know* what the term means as applies to repeaters.
But I'm going to let you try and discover the meaning for yourself.

> This 'One Big Gun' mentality to wide coverage is flat out wrong. The
>right way is, of course, to link smaller machines together. Yes, it may be
>more expensive, require links freqs, etc. etc, but it will keep everyone
>happy. It will keep your signal from hitting everyone in the continental
>US during a band opening, and it will ensure that almost everyone who can
>hear the repeater can talk to it.

Well, Mark, as long as we're talking about the "right" way, don't stop there.
The "Right" way is to use available frequency reuse technology and
have every ham repeater convert over to full digital cellular telephone-style
systems. Of course, we must ignore those hams for whom our "right" way
doesn't fit. All in the name of being "right" of course.

>"The ARRL, the Federal government, and all state governments should be required
>to pass all regulations, laws, and practices through a Department of Common
>Sense." - Mike Gordon N9LOI mwgordon@nyx.cs.du.edu

What a wonderfully ironic quote to include in an article as non-common sensical

as yours.

John

--

John De Armond, WD40QC | Interested in high performance cars?
Performance Engineering Magazine(TM) | Interested in high tech and computers?
Marietta, Ga | Send ur snail-mail address to
jgd@dixie.com | perform@dixie.com for a free sample mag
The Great Tragedy of the 20th century is that Clinton's name isn't on the Wall.

Date: Fri, 2 Jul 93 21:25:57 GMT
From: mnemosyne.cs.du.edu!nyx!jmaynard@uunet.uu.net
Subject: Repeater coordination, complaints?
To: info-hams@ucsd.edu

[This discussion really belongs in .policy; followups redirected.]

By and large, John's posting is on target...I feel compelled to correct one factual error (if only in implication):

In article <w4hx86n@dixie.com> jgd@dixie.com (John De Armond) writes:
>No he didn't. He claimed the other machine was running the "legal
>limit". I'll be charitable and assume he knows what the legal limit is.
>It is obvious >>YOU<< don't. I'm still waiting for you who, in true ham
>fashion argue vociferously from a perspective of abject ignorance, to
>define the term. I *know* what the term means as applies to repeaters.
>But I'm going to let you try and discover the meaning for yourself.

I assume you're talking about the HAAT vs. ERP limits that were a part of repeater rules for years. Those went away in the last rewrite; the FCC decided that that issue could and should be left up to the coordinators, instead of being cast in regulatory concrete.

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.
"If my car ran OS/2, it'd be there by now" -- bumper sticker

Date: Fri, 2 Jul 1993 19:44:37 GMT
From: nih-csl!helix.nih.gov!arm@uunet.uu.net
Subject: RG-58 coax cable vs. RG-223
To: info-hams@ucsd.edu

In article <1993Jul2.111421.5225@ulthb.isc.rit.edu> jdc3538@ulthb.rit.edu () writes:

>
>What is the difference between RG-58 and RG-223? Both are 50 ohms,
>but RG-223 costs much more. RG-223 has more capacitance per foot,
>so isn't it more lossy? Unfortunately, the ARRL antenna book does
>not list the loss in db/100 ft for RG-223.
>
>73's
>Jim N2VNO

RG223 is double shielded.

--

Andrew Mitz, Biomedical Eng., Nationl Institutes | Opinions are mine alone
of Health Animal Center, Poolesville, MD | arm@helix.nih.gov

Date: Fri, 2 Jul 1993 22:00:46 GMT
From: psinntp!isc-newsserver!ultb!jdc3538@uunet.uu.net
Subject: RG-58 coax cable vs. RG-223
To: info-hams@ucsd.edu

In article <C9Js0v.DMG@hpcvsnz.cv.hp.com> tomb@lsid.hp.com (Tom Bruhns) writes:
>J.D. Cronin (jdc3538@ultb.isc.rit.edu) wrote:

>
>: What is the difference between RG-58 and RG-223? Both are 50 ohms,
>: but RG-223 costs much more. RG-223 has more capacitance per foot,
>: (etc.)
>
>Huh? My reference book lists both at 28.5pF/foot. Expect this for
>cables of the same impedance using the same insulation; it's pretty
>much a fact of life (unless the inner conductor is coiled to make
>a delay line).
>
>I'd expect slightly lower loss in the 223 because its inner
>conductor is solid instead of stranded, and because it's silver
>plated instead of tinned. For a discussion about how the
>stranded center conductor increases loss, see "RF Design"
>magazine of a bit over a year ago for an article, I think
>written by a fellow from Andrews Cable. It's a small-
>percentage effect.

Thanks for the many replies. MECI (1-800-344-4465) is selling both
Belden RG-58 and a no-brand-name-mentioned RF-223 for 10 cents/foot,
with a 100 foot minimum order. I'd love to get a couple hundred
feet of Belden 9913 or foam RG-8, but it's somewhat more expensive.

MECI also has some really cheap stuff at 3 cents/foot, but have no impedance information. Too bad... It's probably for some unusual impedance for a funky network.

73's...Jim
N2VNO

Date: 2 Jul 93 16:50:45 CDT
From: timbuk.cray.com!hemlock.cray.com!cherry10!dadams@uunet.uu.net
Subject: tornado last night
To: info-hams@ucsd.edu

Is there a role for Hams in situations like these?

Tornado last night.

Or was it just High winds? We don't know for sure,
but it whiped through our neighborhood last night!

I was standing in the driveway watching the light show that was going off. Some lightening strikes lit up the landscape in green and some in blue and most in white. They were going off at a rate of several per second for the longest time, and the rain wasn't comming down, so I just watched.

It started to rain so I went in. Suddenly it was raining like to raise the ark. In an instant my peppers were under 2" of water and the street was flowing like a river. A large branch snaped off a big tree in our front yard and blocked our drive way. The power went out. It continued to rain with a vengance for about 30 minutes. Then it stoped almost as suddenly.

I went out to move the branch, but couldn't budge it until I had cut it in three pieces with the bow saw.

My neighbor had a large maple split in two. The next house down had a large tree fall on top of their sports car. The rest of the street was litered with large trees. Cars couldn't get through. Several cars had been smashed by trees. Around the corner one car had been picked up and smashed down on top of another. Tellephone poles all down the street had been snapped in three places as if they had been toothpicks. Fire trucks, ambulances, and police were trying to get through every where, blaring their sirens.

The Ashland Oil refinery in St. Paul Park Had an explosion, and a large fire broke out. I don't know if it was struck by lightening, or damaged by high winds or both. Fire departments were responding from Inver Grove Heights and other remote places. It burned late into the night and lit up the sky.

In the morning a stroll around the neighborhood revealed much more damage. I saw garages that had been knocked to pieces. Around the other side of the block we found somebody's roof smashed to pieces in the middle of the street. A little ways down, there was the house with the missing roof. Houses all over the neighborhood were missing part of their roofs or had severe roof damage. There are shingles scattered all over the neighborhood.

I went at least 7 or 8 blocks in each direction from my house and could see that the damage just went on and on. I couldn't tell where the path started or stoped.

I don't know if it was a tornado or just high winds. I have heard news reports that said each. Our power is out and will probably be for a long time. NSP is busy raising new poles all down the street.

The National Guard is out, and they have barricaded all the streets in my neighborhood. They won't let anyone in or out with out ID. On the way home from my little walk they stopped me. I was afraid they wouldn't let me home, 'cause I had left all my ID home. :-0.

My neighbor to the back has a Ham radio tower up 60 feet or so. It was not harmed at all. To the south of him two houses, a small quad antenna was blown off a roof, and large trees were toppled. Go figure.

Our house was pretty much left unharmed. One of the fans on the roof blew over, but I climbed up and fastened it back on. It seemed to be ok. The garden was roughed up a bit, but I suppose it will survive.

The news crews are up and down the streets, and the news helecopters are flying overhead, so we are one of the big news stories in the twin cities, and we don't even get to watch. :-(.

I got on 2 meters last night to see if I could find out how widespread the damage was. And this morning I specifically tried to find out if anyone on the other side of the river (Mississippi) had been hit, as the path of destruction seemed to come from over there. Nobody seemed to be out there listening.

David, NOWWN (from work)

--David C. Adams Statistician Cray Research Inc. dadams@cray.com
-Sourdough and Ham- - Minnesotans for Global Warming! -
(&gardner)

Date: Fri, 2 Jul 93 07:21:00 -0500
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!ncoast!pcohio!
gary.gabriel@network.UCSD.EDU
Subject: WANTED: FT202R Manual
To: info-hams@ucsd.edu

I need a manual for a Yaesu FT202R. It is a fairly ancient unit and after salvaging it from a flea market and nursing it back to health I'd like to get to know it better. If no manual, does anyone know the specs of this puppy, like wattage out, etc.

Can Yaesu sell me a manual ???

Thanks in advance !

Gary

~ OLX 2.1 TD ~ Hello, I am part number 3:^:3:3[3:]3:]33

Date: Fri, 2 Jul 93 21:16:06 GMT
From: mnemosyne.cs.du.edu!nyx!jmaynard@uunet.uu.net
To: info-hams@ucsd.edu

References <134084@netnews.upenn.edu>, <VX016B1w164w@jwt.oau.org>,
<134433@netnews.upenn.edu>syne.c
Subject : Re: Closed Autopatches

In article <134433@netnews.upenn.edu> yee@mipg.upenn.edu (Conway Yee) writes:
>The reason I refused to give the license is a matter of personal politics.
>It is up to the club to justify why they need the license- not for me to
>justify why I should not give it. Since they did not have a reason to need
>the information, I consider the request a violation of my privacy. Yes,
>they could obtain the same information from other sources but that does not
>justify why I should willingly participate in an action which is a violation
>of my rights. In the other club, there was a distinct reason- they wanted
>it for the purposes of operating the club station. I was interested in
>operating this station and I agreed. In this case, no such reason exists.

Call-Sign: N2JWQ Class: TECHNICIAN
Real Name: CONWAY YEE Birthday: AUG 27, 1965
Mailing Address: 2144 E 21 ST, BROOKLYN, NY 11229
Valid From: SEP 19, 1989 To: SEP 19, 1999

Have I just violated your privacy?

Besides, you wanted to operate the club's closed autopatch. It's entirely possible that you would be operating the club station: Since it's illegal to pass third-party traffic while a repeater operates under automatic control, many clubs that run autopatches on their repeaters designate the user as control operator while the autopatch is in progress - thus, you would be operating their station, and for them to have a copy of your license is not an unreasonable request.

Personally, I think you're just being either difficult or paranoid.

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.

"If my car ran OS/2, it'd be there by now" -- bumper sticker

End of Info-Hams Digest V93 #814
